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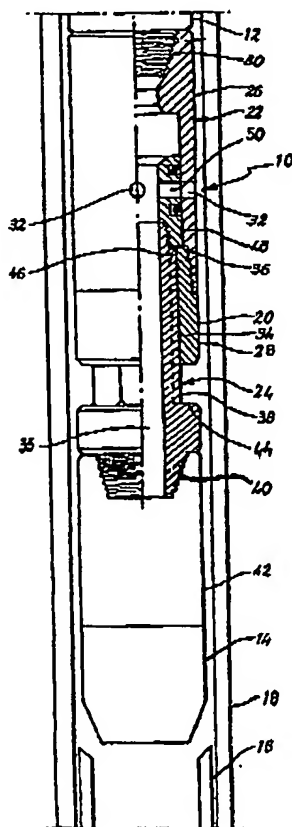
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(54) Title: **CIRCULATING SUB**



(57) Abstract: A control sub for use with a hydraulically operated downhole tool. In an embodiment, the sub comprises an outer sleeve connected to a work string and an inner sleeve slidably engaged to the outer sleeve by matching hex profiles, connected to the downhole tool. Radial ports in the outer sleeve provide selective circulation of fluid from the tool and by closing these ports with the sleeve fluid pressure in to the downhole tool can be controlled. Closure is effected by setting down weight on the sub against the tool. An indexing mechanism is also described to keep the tool in a configuration, which maintains pressure on the tool. The sub is suitable for use with an expander tool.

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